

ABSTRACT OF THE DISCLOSURE

In an FCVD process for producing preforms for dispersion shifted optical fiber or dispersion compensating optical fiber having a core comprising a central portion, an inner cladding, a ring, and an outer cladding by depositing layers, the  
5 layers of the preform corresponding to the inner cladding and to the ring of the optical fiber have a phosphorus content not greater than 0.1 wt%.